ABSTRACT OF THE INVENTION

A method and system that combines efficient caching and buffering to provide a network file system, that may utilize data stored in one or more compressed image files of

5   sequentially arranged byte stream data. As an application requests file opens and file reads of a file system, one or more drivers convert the block requests into HTTP: byte range requests or the like in order to retrieve the data from a remote server. As the data is received, it is reconverted and

10   adjusted to match the application's request. Sequential block access patterns can be detected and used to request additional data in a single request, in anticipation of future block requests, thereby increasing efficiency. Local caching of received data, including caching after uncompressing received

15   data that was compressed, further increases efficiency. A compressed file system format optimized for sequential access is also described that when used, further improves the efficient data access.